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West Virginia's Upper Buckhannon, Finks & Peck's Run Watersheds

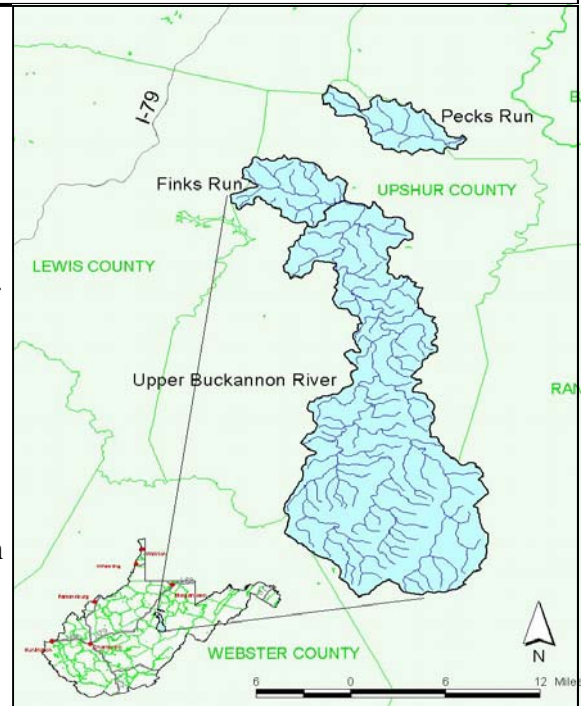
Tygarts Valley Framework Workgroup Builds Success

Snapshot

The Upper Buckhannon, Finks and Pecks Run watersheds were identified through the WV Watershed Management Framework as priority watersheds for WRAS development and a final WRAS document was prepared in October 2000. As a part of the Framework effort an Upper Buckhannon Project Team (UBPT) was formed including representatives of state and federal agencies, business, local academia and the newly formed Buckhannon River Watershed Association (BRWA). In 2004 a subcommittee using a S319 grant completed three separate Watershed Based Plans (WBP) for the three separate sub-watersheds.

These three watersheds are a part of the Tygarts Valley River Watershed, which has a TMDL for metals due to mine drainage and acid deposition. These priority watersheds have also been listed on the 303(d) list for violations due to fecal coliform. The Upper Buckhannon watershed covers approximately 94,800 acres, Finks Run 10,300 acres, and Pecks Run covers 8,200 acres. This priority selection is unique in WV for its multiple causes and sources for impairment. In the mountainous, forested headwaters of the Upper Buckhannon acid deposition has rendered many of these former trout streams sterile. Further downstream past coal mining has lowered pH and contaminated the streams with metals such as aluminum, iron and manganese. Finks Run has some of everything; past coal mining, agriculture and growing development. Pecks Run is predominantly agriculture with some coal mining acid mine drainage (AMD), and sediment is a problem in all three sub-watersheds.

As some of the oldest of the Framework's priority watershed selections these have been a challenge, and there are no easy solutions here. The purpose of the UBPT was to bring resources and expertise to bear on these problems but also to have the participation and support of the local citizens. Local citizens from varied professional backgrounds including forestry, municipal and state government, construction, education, journalism, law and the coal industry formed the Buckhannon River Watershed Association (BRWA). Besides encourag-



ing input from local citizens, the BRWA has been an important source of matching funds for S319 grants.

Problems

Agriculture

The first efforts in this project area focused primarily on agriculture. In FY 01 the first S319 project was submitted for \$400,675. This grant supported various nonpoint source activities including agricultural BMP's and oil & gas road restorations. Agriculture BMP's, were installed within the project area with planning and technical assistance from NRCS. There were 6 contracts in the Pecks Run watershed, 3 in the Finks Run watershed, and 2 in the Upper Buckhannon watershed. The agricultural BMP's installed included 3 water supply systems, 3 heavy use protection systems, 6 roof run off management systems, 3,430 feet of fencing and 2 waste storage systems. The pollutant load reductions from these practices were 372 tons of nitrogen, 477 tons of phosphorus and 1,458 tons of sediment.

Funded from this grant was a sediment reduction project on a natural gas pipeline. A 20" high-pressure gas line right of way and the access roads to it were being used by locals as an off-road driving track. Known locally as the "Mud Bog" it became the Craddock Pipeline Project. The Project was implemented with many partners including the WV Conservation Agency (WVCA), WV Department of Environmental Protection (WVDEP), BRWA, WV Division of Natural Resources (WVDNR), Columbia Gas, and Coastal Lumber. A total of 68 tons of sediment was eroding from these sites per year. This was reduced to 4.5 tons after the restoration work resulted in a 93.4% reduction. The total 319 cost of both pipeline restoration projects was \$19,998.00. The match for this project, totaling \$28,885.08, came from Columbia Gas who was concerned that this unauthorized activity could damage the gas line and injure someone.

A FY 03 S319 grant is funding another \$419,329 worth of agricultural and oil & gas restoration activities.



Mudlick Run coal refuse area before the project.

Acid Mine Drainage Remediation Project

The Mudlick Refuse project was a large, highly acidic refuse area that had been a coal mining processing area in Finks Run. Runoff from the toxic refuse pile polluted Mudlick Run and during high stream flows, coal fines were washed into the stream. This project was completed and water quality monitoring results show a reduction of 144.5 tons/year of acid and 3.2 tons/year of aluminum. This project involved re-grading the refuse area to manage runoff, sealing and covering the coal refuse area, armoring potential erosion areas, using limestone to reduce acidity in drainage areas and seeding and mulching the entire area. The project will also incorporate stream bank stabilization including limestone drainage channels and limestone sand treatment.

This project involved many partners and some were not full time participants in the UBPT. In addition to the BRWA and the Nonpoint Source Program in the WVDEP, the partnership included the Federal Office of Surface Mining, WVDEP Office of Abandoned Mine Lands, and the Canaan Valley Institute.



Craddock Pipeline Project from "Mud bog" to restored area.

Besides the \$90,000 in federal S319 NPS funds, the other partners contributed a total of \$348,170 towards the project.

Challenges

The challenge of the Upper Buckhannon, Finks Run and Pecks Run watershed project has been to address the wide variety of impacts in these watersheds. The FY 01 and FY 03 grants dealt primarily with agriculture with some oil & gas erosion efforts. The Mudlick AMD Project dealt with one of the most serious sources of AMD in Finks Run. However, more remains to be done in these watersheds to achieve restoration of water quality standards. Some strategic decisions needed to be made by the partners who make up the UBPT.

The FY 03 S319 agricultural money is being focused on Pecks Run because agriculture is the predominant land use in that sub-watershed. New gas road and pipeline projects are being planned to capitalize on the success of the Craddock pipeline project. The WVDEP Basin Coordinator is working closely with the WV Department of Natural Resources (WVDNR) to focus air pollution mitigation funds to the streams in the Upper Buckhannon that are impaired by acid deposition.

The WVDEP, WVDNR and Dominion Energy, Inc were involved in negotiations that have resulted in a process that will treat the acid deposition problem in Upper Buckhannon watershed. A \$2 million settlement from Dominion Energy, Inc to WVDEP was deposited in WVDNR's limestone fines program. The interest from this fund will support the application of limestone fines into several acid impaired tributaries of the Upper Buckhannon. Historical data from WVDNR and WVDEP showed an average summer pH around 6 but the spring acid pulse from snow melts and rain would lower the pH to below 4 wiping out most aquatic life. After the initial treatments WVDNR began stocking trout into the Right Fork and other tributaries. WVDEP installed a continuous pH probe in Marsh Fork of the Right Fork. After a year of data collection the pH has dropped below 6 only 2% of the time and the majority of the pH readings are around 7. WVDNR has reported year-long trout survival and WVDEP expects to remove the treated streams from the 303(d) list in 2008.

For the future of this restoration effort it was necessary to update and revise the WBPs. The UBPT has decided to focus on the Upper Buckhannon sub-watershed first. In revising the WBP the issue of fecal coliform contamination from individual residences and small communities has to be addressed. This is a complicated and difficult issue and in order to pull together as many resources as possible the number of partners in the UBPT has increased. The local and state health departments as well as the Rivers Coalition and West Virginia University have joined the UBPT to focus on this issue.

Future Efforts

The issue of nonpoint source pollution from failing septic systems has been a particularly difficult issue for West Virginia. Low income homeowners can not afford upgrades or replacements of their existing systems. Without a focused effort and assistance this pollutant will never be removed. Thanks in part to the UBPT and other locally driven and S319 supported efforts in the Upper Guyandotte and Upper Tug Fork watersheds the issue of failing septic systems is now receiving greater statewide attention.



A cameraman from WCHS TV films the first application of limestone fines to the Right Fork of the Upper Buckhannon River.



Partnerships are the key. Brent Wahlquist of the OSM and Paul Richter of the BRWA.

There is no question that the UBPT is beginning to be viewed as a success for West Virginia's Watershed Management Framework. The implementation of S319 funded projects are only part of the story; other resources and expertise being contributed by additional partners are significant as well.

Photo's Courtesy of WV DEP

Partners & Funding

Upper Buckhannon Project Team	Columbia Gas
Buckhannon River Watershed Association	Coastal Lumber
U.S Environmental Protection Agency	Federal Office of Surface Mining
WV Conservation Agency	WVDEP Office of Abandoned Mine Lands
WV DEP	Canaan Valley Institute
WV Division of Natural Resources	

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